

C26  
C1

15. (Twice Amended) Digital signal conversion apparatus for converting a first digital image signal to a second digital image signal having a high resolution component, comprising:  
a memory for storing class data for respective classes at addresses corresponding to said respective classes,  
said class data being associated with at least a training digital image signal having said high resolution component;  
means for receiving said first digital image signal including pixel data representing pixel values;  
means for clustering a plurality of pixel data of said first digital image signal adjacent to a pixel data of said second digital image signal to produce a class;  
means for retrieving said class data from one of said addresses of said memory corresponding to said class of said first digital image signal; and  
means for generating all of pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data.

C2 505 327

19. (Twice Amended) A digital signal data conversion method for converting a first digital image signal to a second digital image signal having a high resolution component, comprising the steps of:

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storing class data for respective classes at addresses in a  
memory corresponding to said respective classes, said  
class data being associated with at least a training  
digital image signal having said high resolution  
component;  
receiving said first digital image signal including pixel data  
representing pixel values;  
clustering a plurality of pixel data of said first digital image  
signal adjacent to a pixel data of said second digital  
image signal to produce a class;  
retrieving said class data from one of said addresses of said  
memory corresponding to said class of said first  
digital video signal; and  
generating all of pixel data, representing pixel values of said  
second digital image signal, in the same manner in  
accordance with a common algorithm based upon at least  
said retrieved class data.

S237  
C3  
23. (Twice Amended) Digital signal conversion apparatus for  
converting a digital video signal admitting of a first standard  
into a digital video signal admitting of a second standard, a  
first resolution of said digital video signal admitting of said  
first standard being lower than a second resolution of said  
digital video signal admitting of said second standard,  
comprising:

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a memory for storing class data for respective classes at  
addresses corresponding to said respective classes,  
said class data being associated with at least a  
training digital video signal admitting of said second  
standard having said second resolution;  
means for receiving an input digital video signal including pixel  
data and admitting of said first standard;  
means for clustering a plurality of pixel data of said input  
digital video signal adjacent to a pixel data of a  
second digital video signal to produce a class;  
means for retrieving said class data from one of said addresses  
of said memory corresponding to said class of said  
input digital video signal admitting of said first  
standard; and  
means for generating all of pixel data, representing pixel values  
of said digital video signal admitting of said second  
standard, in the same manner in accordance with a  
common algorithm based upon at least said class data  
which has been retrieved.

sub 21  
c4  
27. (Twice Amended) Digital signal conversion apparatus for  
converting a standard definition digital video signal to a high  
definition digital video signal, comprising:  
a memory for storing class data for respective classes at  
addresses corresponding to said respective classes,

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said class data being associated with at least a  
training high definition video signal;  
means for receiving a standard definition digital video signal  
having pixel data representing pixel values;  
means for clustering a plurality of pixel data of said standard  
definition digital video signal adjacent to a pixel  
data of a second digital video signal to produce a  
class;  
means for retrieving said class data from one of said addresses  
of said memory corresponding to said class of said  
standard definition digital video signal; and  
means for generating all of pixel data, representing pixel values  
of a high definition digital video signal, in the same  
manner in accordance with a common algorithm based  
upon at least said retrieved class data.

Sub D57

30. (Twice Amended) A digital signal conversion method,  
comprising the steps of:

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storing class data for respective classes at addresses in a  
memory corresponding to said respective classes, said  
class data being associated with at least a training  
high definition digital video signal;  
receiving a standard definition digital video signal having pixel  
data representing pixel values;

C5  
clustering a plurality of pixel data of said standard definition  
digital video signal adjacent to a pixel data of a  
second digital video signal to produce a class;  
retrieving said stored class data from one of said addresses  
corresponding to said class of said standard  
definition digital video signal; and  
generating all of pixel data, representing pixel values of a  
second output digital video signal, in the same manner  
in accordance with a common algorithm based upon at  
least said retrieved class data.

Sub 33. (Twice Amended) Digital data conversion apparatus for  
C6  
converting a first digital image signal to a second digital image  
signal having a high resolution component, comprising:

a memory for storing class data for respective classes  
at addresses corresponding to said respective classes, said class  
data being associated with at least a training digital image data  
having said high resolution component;

means for receiving said first digital image signal  
including pixel data representing pixel values;

means for clustering a plurality of pixel data of said  
first digital image signal adjacent to a plurality of pixel data  
of said second digital image signal to produce a class, said  
class being used to retrieve a class data to generate a plurality  
of pixel data representing pixel values of a second digital image  
signal;

6b means for retrieving said class data from addresses of  
said memory corresponding to said class of said first digital  
image signal; and

means for generating all of said pixel data,  
representing pixel values of said second digital image signal, in  
the same manner in accordance with a common algorithm.

CP 36. (Twice Amended) Digital data conversion method for  
converting a first digital image signal to a second digital image  
signal having a high resolution component, comprising the steps  
of:

storing class data for respective classes at addresses  
in a memory corresponding to said respective classes, said class  
data being associated with at least a training digital image data  
having said high resolution component;

receiving said first digital image signal including  
pixel data representing pixel values;

clustering a plurality of pixel data of said first  
digital image signal adjacent to a plurality of pixel data of  
said second digital image signal to produce a class, said class  
being used to retrieve a class data to generate a plurality of  
pixel data representing pixel values of a second digital image  
signal;

retrieving said class data from addresses of said  
memory corresponding to said class of said first digital image  
signal; and